

# CERTUS™

INDEPENDENT  
AND LIFELONG  
VERIFICATION  
OF DOCUMENT  
CREDENTIALS



Enabling trust





# **A breakthrough digital seal technology**

# Issue and verify your certificates with tamper-proof QR-code marking

CERTUS™ is a novel digital solution that enables document issuers like educational institutions, government bodies or notaries to secure documents and qualifications.

It is a cost-effective next-generation security solution which sets a new standard in securing sensitive paper-based and digital documents.



## INDEPENDENT AND UNIVERSAL VERIFICATION

Secured by blockchain technology, verification is quick and proven for life



## PAPER AND DIGITAL DOCUMENTS

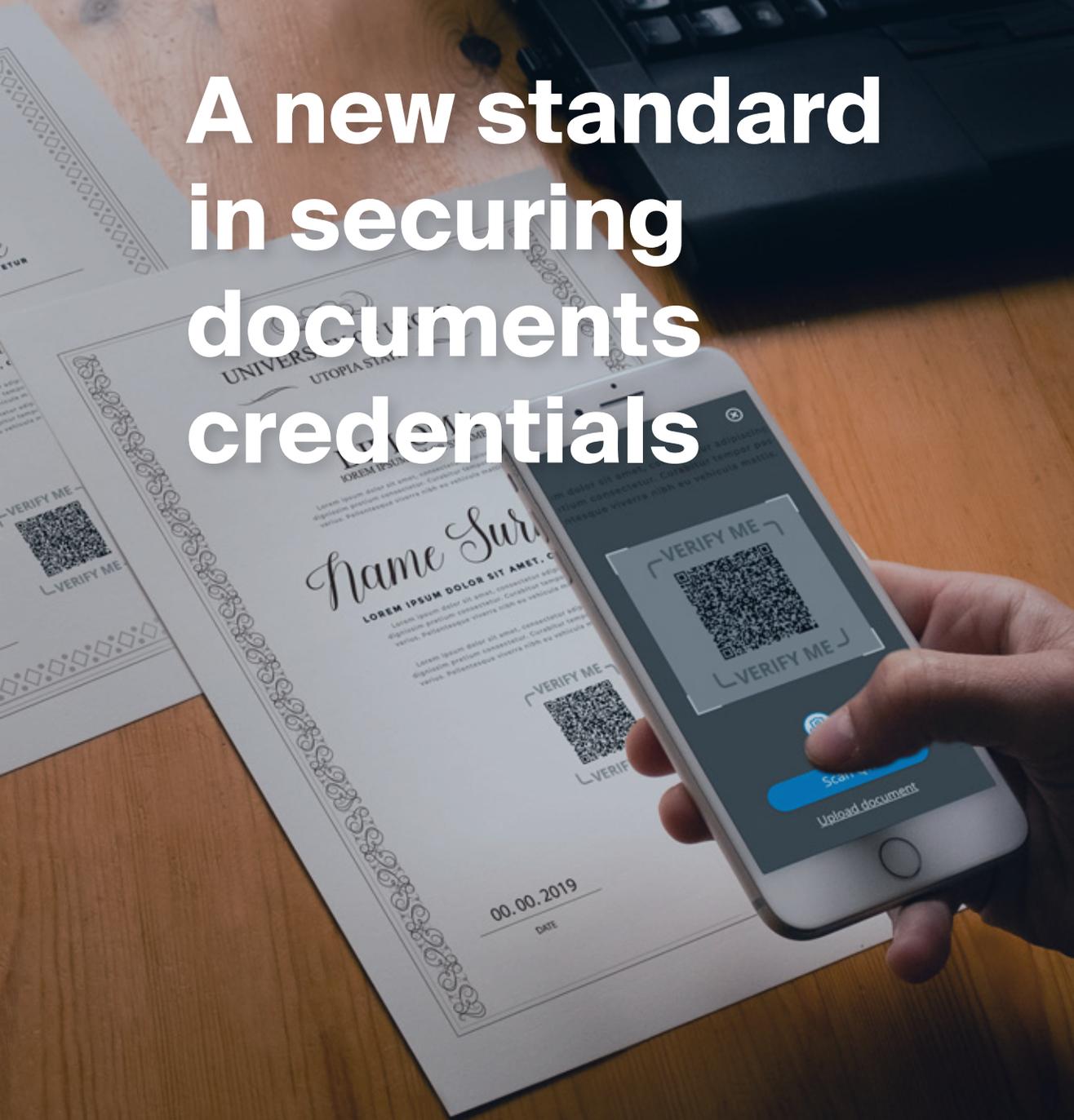
The technology is specially designed to bridge the digital and physical worlds



## PRIVACY- PRESERVING

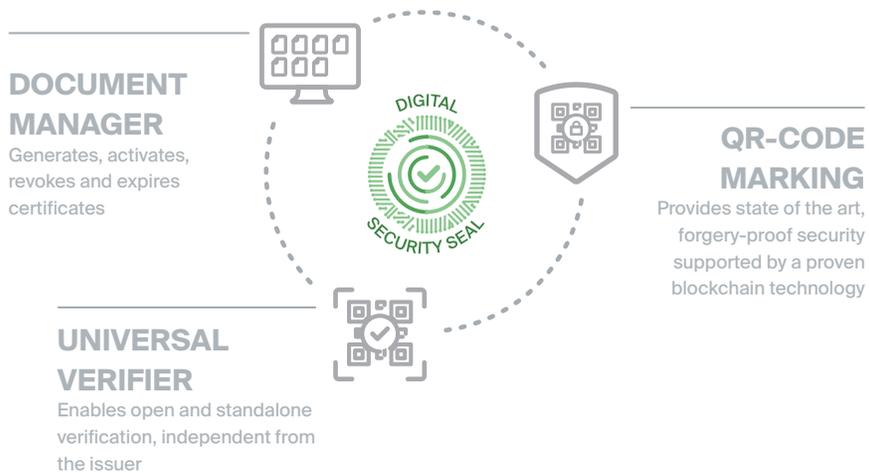
No need to store personal data thanks to the unique proof delivered by the digital security seal

# A new standard in securing documents credentials



CERTUS™ sets a new standard in securing documents and qualifications. It combines breakthrough digital seal technology protected by the blockchain with a secure QR-code applied to documents. The result is a QR code marking which is impossible to tamper with or forge and secures both paper-based and digital certificates.

CERTUS™ enables independent and universal verification, safeguarding the value of holders' documents and the reputation of issuing authorities.



As a novel solution, CERTUS™ offers several advantages over alternatives in the market:

- ✔ One-click universal and independent verification
- ✔ Lifelong validity of issued certificates
- ✔ Works for paper and digital certificates
- ✔ Immediate access to a simple and cost-effective online service, no infrastructure required
- ✔ Privacy-preserving, does not store sensitive data
- ✔ Enables offline verification
- ✔ Authenticates the issuer and the protected data
- ✔ Versatility, protects any type of data structure

# State-of-the-art secure marking

...  
I have acknowledged before my by \_\_\_\_\_ day of \_\_\_\_\_  
I have subscribed and sworn to before my by \_\_\_\_\_ day of \_\_\_\_\_  
\_\_\_\_\_ witnesses, this \_\_\_\_\_ day of \_\_\_\_\_



The CERTUS™ tamper-proof QR-code protects the claim - the sensitive data - directly, instead of the document itself. This makes it an ideal complementary solution to material security features for simple verification of paper and digital documents using widely available mobile devices.

The QR code contains the data to be protected in plaintext and a cryptographic signature, which acts as an undisputable mathematical proof of the link between the data to be protected and its digital security seal. Anonymised or encrypted data can also be included within the QR code in order to preserve confidentiality.

### SECURED DATA IN PLAINTEXT

Issuer : Utopia University  
 Diploma : Master of Science in Economics  
 Student : Michael Smith  
 Issuing date : 16.02.2020  
 President : Edouard Bolton  
 Identifier : mZ08Q=\n0GpKb4



### CRYPTOGRAPHIC SIGNATURE

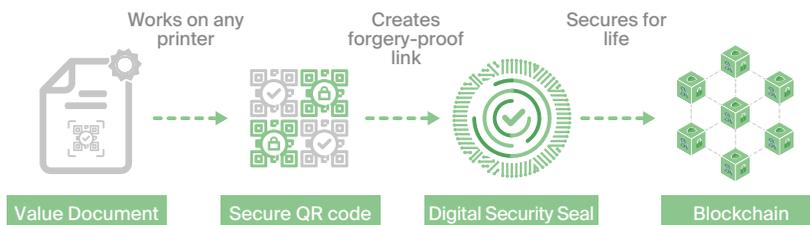
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## A digital security seal

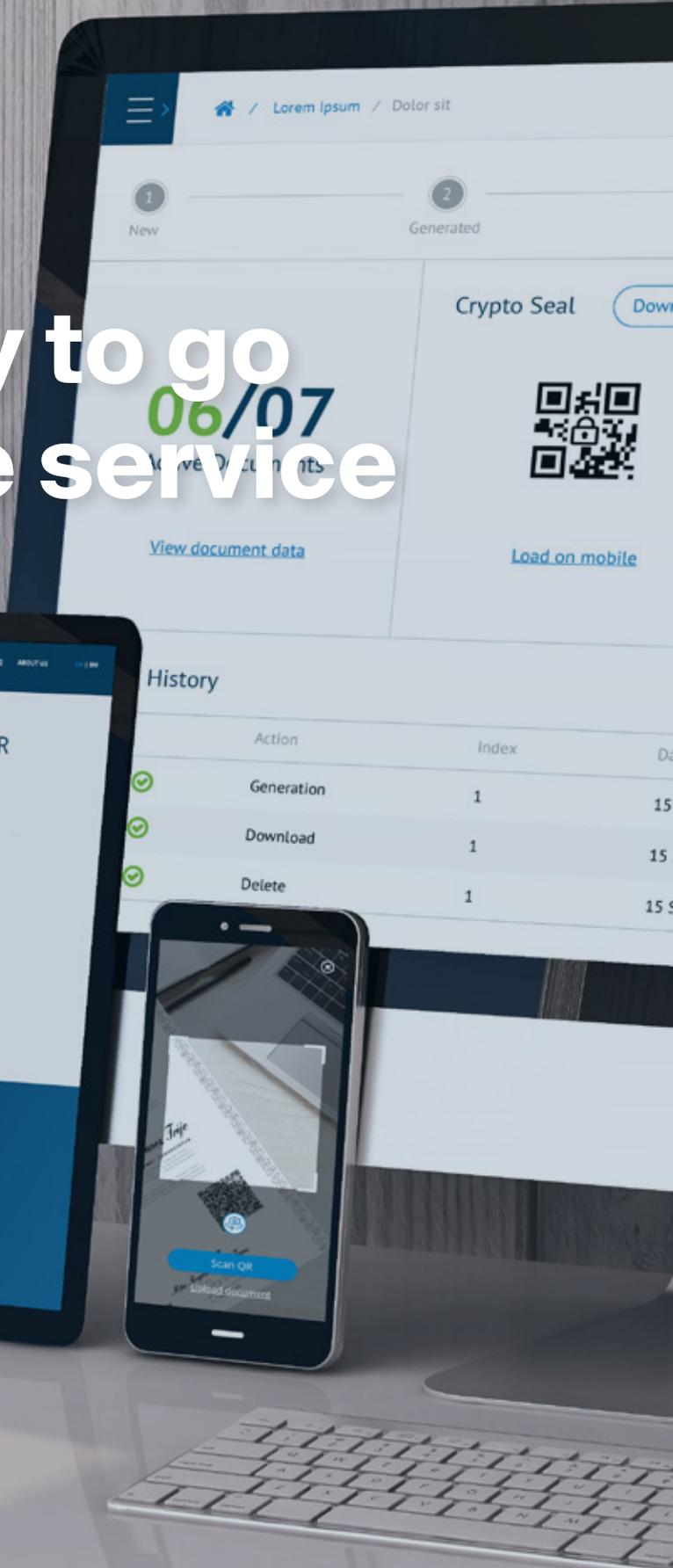
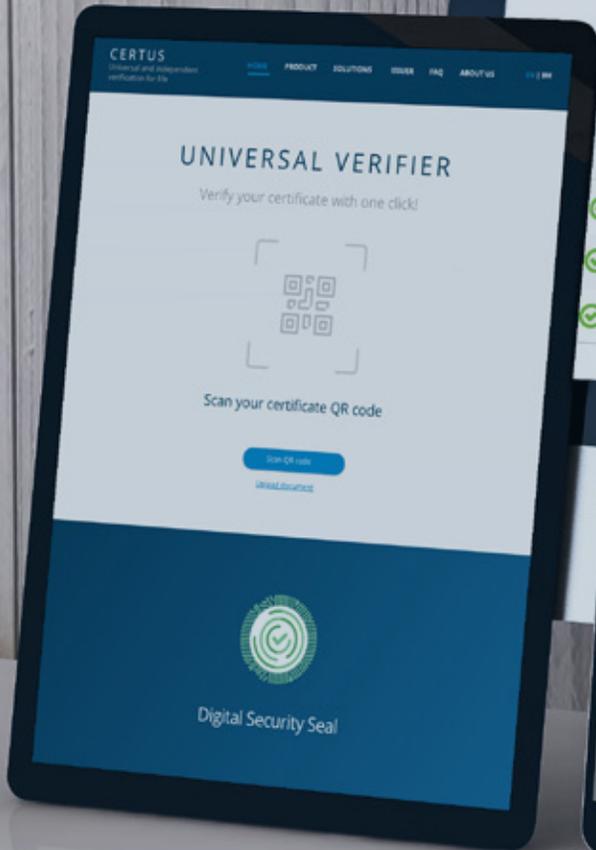
The digital security seal protects and guarantees the integrity of the secured data. It seals a secured QR-code by creating a forgery-proof link with the QR-code's cryptographic signature.

As documents are activated, the seal is secured by its signature on the blockchain, ensuring lifelong immutability. The seal contains only metadata such as the issuer name and the date of activation. No sensitive information is stored in this latter.

The novel combination of the QR code, the digital seal and the signature on the blockchain makes the CERTUS™ security marking virtually impossible to tamper with or forge, and renders it universally and independently verifiable for life.



# Ready to go online service



## Simple and cost effective

CERTUS™ is a digital solution operated by SICPA and delivered to customers as an online service - SaaS, Software as a Service. It is based on a proven blockchain which has been in operation for more than ten years and does not require any specific customer setup.

CERTUS™ is easy to set up and can be immediately operational for a wide variety of use cases. Full automation and integration with existing IT processes can be achieved thanks to the simple and open REST API.

## Privacy preserving

Personal and sensitive data are never stored, neither directly, nor encrypted, in any database or on the blockchain. Only the indecipherable digital seals, needed to verify a secure mark, are secured by the blockchain to ensure their lifelong immutability.

## Confidence in the integrity of the certificate issuing process

Based on mathematical proofs, the issuer, the holder and the verifier can be 100 percent confident in the origin and the legitimacy of the credentials.

CERTUS™ provides independent verifiable proof of:



Date and time of issuance of the document



Name of the issuing authority



Current validity of the document (active, expired, revoked)



Authenticity of the underlying claim

CERTIFICATE OF BIRTH  
UTOPIA STATE



Original No° 1234567  
CERTIFICATE OF BIRTH

# What does it mean for the issuer?

UNIVERSITY OF UTOPIA  
UTOPIA STATE



DIPLOMA  
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## **Simplify your verification procedures, save time and money**

As a document issuer, whether private or public, you spend valuable time and money verifying documents already issued to holders. With CERTUS™ you have a means to reduce the administrative burden of current systems and put a simple and effective tool in the hands of third-party verifiers. This enables individual document holders or verifiers to take charge of the verification process themselves, without the need to contact you directly or access any of your systems. You can free up time and money spent on traditional verification processes and put this simple, cost-effective and easy to use solution into action.

## **Protect your reputation**

Certificates, official documents and records that you issue carry lifelong importance and value for the community and individuals you serve. CERTUS™ will help protect your reputation as a respected issuing authority, strengthens trusted relationships with verifiers and offers peace of mind to document holders.

## **CERTUS™ has a multitude of applications**

CERTUS™ is a versatile solution that transforms the way in which a range of official documents and records are issued and secured:

-  Academic records
-  Civic records
-  Legal records
-  Official documents
-  Financial records
-  Health records
-  Business records

An aerial, top-down view of a large group of cyclists riding their bicycles on a paved plaza. The cyclists are scattered across the frame, moving in various directions. They are wearing colorful cycling gear, including jerseys, shorts, and helmets. The pavement is made of light-colored, rectangular tiles. The overall scene is active and dynamic, representing a community of cyclists.

**Who  
benefits from  
CERTUS™?**

CERTUS™ protects the reputation of legitimate issuing authorities, strengthens trusted relationships with verifiers and offers peace of mind to document holders, while also freeing up time and money spent on traditional verification processes.



## ISSUERS

The authority responsible for issuing the certificate or official record can rely on CERTUS™ to protect its reputation as the rightful issuer and enable trust among its community of holders

## HOLDERS

Document holders can rest assured knowing they can irrefutably prove that CERTUS™-protected claims are valid and authentic without relying on any third party

## VERIFIERS

Any third-party verifier, for example employers, can benefit from the fast and fool proof CERTUS™ solution, which will significantly reduce the costs of the verification process

# Why SICPA?





## **We have experience in enabling trust.**

SICPA is a leading global provider of secured authentication, identification and traceability solutions and services and a long-trusted advisor to governments, central banks, high security printers and industry. Founded in 1927, headquartered in Switzerland and operating on five continents, SICPA's mission is to Enable Trust through constant innovation. Every day, governments, companies and millions of people rely on us to protect the integrity and value of their currency, personal identity, documents, products, and brands.

SICPA has established a global partnership with Guardtime®, the world's leading enterprise blockchain company. Guardtime®'s KSI® Blockchain has been in operation for more than ten years, securing public services for the Government of Estonia, NATO and numerous other government entities (and leading Fortune 500 companies). The KSI® Blockchain is accredited as a qualified trust service under the EU's e-IDAS regulation.



# Want to know more?

Embark on this transformative journey with us  
where trust is the keyword for all security solutions.

## **SICPA SA**

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[www.sicpa.com](http://www.sicpa.com)

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